

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A piezoceramic composition with the general molecular formula $Pb_{1-a}RE_bZr_xTi_yTR_zO_3$, where a is selected from a range of 0.2 mol% to 3 mol%, x and y are each greater than 0, b is a rare earth metal proportion and z is a transition metal proportion, and the rare earth metal proportion b is selected from a range of 0.2 mol% to 3 mol%, in which

- RE is at least one rare earth metal selected from the group consisting of europium, gadolinium, lanthanum, neodymium, praseodymium, promethium and samarium with the rare earth metal proportion b,

- TR is at least one transition metal selected from the group consisting of chromium, iron and manganese with a transition metal valency W_{TR} and the transition metal proportion z , [[and]]

- a following relationship applies: $z > b/(4 - W_{TR})$, wherein the piezoceramic composition is a lead zirconate/titanate (PZT) piezoceramic composition, and

- an A site of a perovskite has one stoichiometry
such that it is unnecessary that a B site of the perovskite is
non-stoichiometric.

2. (canceled)

3. (previously presented) The piezoceramic composition in accordance with claim 1, wherein a sum of the rare earth metal proportion and of the transition metal proportion z is less than 6 mol%.

4. (previously presented) The piezoceramic composition in accordance with claim 1, wherein the RE is a single rare earth metal and TR is selected from at most two transition metals or TR is a single transition metal and RE is selected from at most two rare earth metals.

5. (previously presented) The piezoceramic composition in accordance with claim 1, wherein a value for a mechanical quality factor Q_m is selected from a range of 50 up to and including 1800.

6. (previously presented) The piezoceramic composition in accordance with claim 1, wherein the composition has a Curie-temperature T_c lying above 280°C.

7-9. (canceled)

10. (previously presented) A piezoceramic body with a piezoceramic composition in accordance with claim 1.

11. (previously presented) The piezoceramic body in accordance with claim 10, wherein a metallization is selected from at least one of the group consisting of silver, copper and palladium.

12-13. (canceled)

14. (previously presented) The piezoceramic body in accordance with claim 10, wherein a monolithic multilayer construction in which piezoceramic layers with the piezoceramic composition and electrode layers with the metallization are arranged alternating above one another.

15. (previously presented) The piezoceramic body in accordance with claim 10, which is a component selected from the group consisting of an actuator, a bending converter, a motor and a transformer.

16. (previously presented) A method for producing a piezoceramic body, comprising:

providing a green body with a piezoceramic composition in accordance with claim 1; and

sintering the green body to the piezoceramic body.

17. (previously presented) The method in accordance with claim 16, wherein the green body is provided with a metallization which is at least one selected from the group consisting of silver, copper and palladium.

18. (previously presented) The method in accordance with claim 16, wherein the sintering is undertaken in an oxidizing or reducing sinter atmosphere.

19. (previously presented) The method in accordance with claim 16, wherein a sinter temperature ranging from 900°C to 1100°C inclusive is selected for sintering.

20. (previously presented) The method in accordance with claim 16, wherein the green body with a plurality of particle growth seeds is used with the piezoceramic composition.

21. (previously presented) The piezoceramic composition in accordance with claim 1, wherein x and y are selected such that a morphotropic tetragonal rhomboidrical phase boundary yields piezoceramic properties of the piezoceramic composition.

22-24. (canceled)

25. (previously presented) The piezoceramic composition in accordance with claim 1, wherein $x+y+z=1$.

26. (currently amended) A piezoceramic composition with the general molecular formula $Pb_{1-a}RE_bZr_xTi_yTR_zO_3$, where a is selected from a range of 0.2 mol% to 3 mol%, x and y are each greater than 0, $x+y+z=1$, b is a rare earth metal proportion and z is a transition metal proportion, and the rare earth metal

proportion b is selected from a range of 0.2 mol% to 3 mol%, in which

- RE is at least one rare earth metal selected from the group consisting of europium, gadolinium, lanthanum, neodymium, praseodymium, promethium and samarium with the rare earth metal proportion b,

- TR is at least one transition metal selected from the group consisting of chromium, iron and manganese with a transition metal valency W_{TR} and the transition metal proportion z, [[and]]

- a following relationship applies: $z > b/(4 - W_{TR})$, wherein the piezoceramic composition is a lead zirconate/titanate (PZT) piezoceramic composition, and

- an A site of a perovskite has one stoichiometry such that it is unnecessary that a B site of the perovskite is non-stoichiometric.

27. (previously presented) The piezoceramic composition in accordance with claim 26, wherein x and y are selected such that a morphotropic tetragonal rhomboidrical phase boundary yields piezoceramic properties of the piezoceramic composition.

28. (currently amended) A piezoceramic composition with the general molecular formula $Pb_{1-a}RE_bZr_xTi_yTR_zO_3$, where a is selected from a range of 0.2 mol% to 3 mol%, x and y are each

greater than 0, $x+y+z=1$, b is a rare earth metal proportion and z is a transition metal proportion, and the rare earth metal proportion b is selected from a range of 0.2 mol% to 3 mol%, in which

- RE is at least one rare earth metal selected from the group consisting of europium, gadolinium, lanthanum, neodymium, praseodymium, promethium and samarium with the rare earth metal proportion b ,

- TR is at least one transition metal selected from the group consisting of chromium, iron and manganese with a transition metal valency W_{TR} and the transition metal proportion z ,

- a following relationship applies: $z > b/(4 - W_{TR})$, wherein the piezoceramic composition is a lead zirconate/titanate (PZT) piezoceramic composition, [[and]]

- x and y are selected such that a morphotropic tetragonal rhomboidrical phase boundary yields piezoceramic properties of the piezoceramic composition, and

- an A site of a perovskite has one stoichiometry such that it is unnecessary that a B site of the perovskite is non-stoichiometric.